

Table A.7. *Graphics.*

<code>plot</code>	<i>x-y</i> plot
<code>fplot</code>	Function plotter
<code>ezplot</code>	Easy-to-use function plotter
<code>semilogy</code>	Plot with logarithmically scaled <i>y</i> -axis
<code>bar</code>	Bar graph
<code>hist</code>	Histogram
<code>axis</code>	Axis control
<code>xlim</code>	Set <i>x</i> -axis limits
<code>ylim</code>	Set <i>y</i> -axis limits
<code>grid</code>	Grid lines
<code>xlabel</code>	Label <i>x</i> -axis
<code>ylabel</code>	Label <i>y</i> -axis
<code>title</code>	Title graph
<code>legend</code>	Display legend
<code>text</code>	Text annotation
<code>subplot</code>	Create axes in grid pattern
<code>hold</code>	Hold current graph
<code>contour</code>	Contour plot
<code>mesh</code>	Wireframe surface
<code>surf</code>	Solid surface
<code>spy</code>	Visualize sparsity pattern
<code>print</code>	Print figure to disk or printer
<code>clf</code>	Clear current figure
<code>close</code>	Close figure

Table A.8. *Linear algebra.*

<code>norm</code>	Norm of vector or matrix
<code>cond</code>	Condition number of matrix (with respect to inversion)
<code>\</code>	Solve linear system of equations
<code>eig</code>	Eigenvalues and eigenvectors
<code>lu</code>	LU factorization
<code>qr</code>	QR factorization
<code>svd</code>	Singular value decomposition

Table A.9. *Functions connected with M-files.*

<code>edit</code>	Invoke MATLAB editor
<code>lookfor</code>	Search H1 line (first comment line) of all M-files for keyword
<code>nargin</code>	Number of function input arguments
<code>nargout</code>	Number of function output arguments
<code>type</code>	List file in Command Window
<code>which</code>	Display full pathname of M-file

Table A.10. *Miscellaneous.*

<code>clc</code>	Clear Command Window
<code>demo</code>	Demonstrations
<code>diary</code>	Save Command Window text to file
<code>dir</code>	Display directory listing
<code>doc</code>	Display HTML documentation in Help browser
<code>help</code>	Display help in Command Window
<code>tic, toc</code>	Start/stop stopwatch timer
<code>what</code>	List MATLAB files in current directory grouped by type

Table A.11. *Data types and conversions.*

<code>double</code>	Convert to double precision
<code>char</code>	Create or convert to character array (string)
<code>cell</code>	Create cell array
<code>num2str</code>	Convert number to string
<code>sparse</code>	Create sparse matrix
<code>struct</code>	Create or convert to structure array

Table A.12. *Managing the workspace.*

<code>clear</code>	Clear items from workspace
<code>who, whos</code>	List variables in workspace
<code>load</code>	Load workspace variables from disk
<code>save</code>	Save workspace variables to disk
<code>exit, quit</code>	Terminate MATLAB session

Table A.13. *Input and output.*

<code>disp</code>	Display text or array
<code>format</code>	Set output format
<code>fprintf</code>	Write formatted data to screen or file
<code>sprintf</code>	Write formatted data to string
<code>input</code>	Prompt for user input

Table A.14. *Numerical methods.*

<b>bvp4c</b>	Solve two-point boundary value problem
<b>fft</b>	Discrete Fourier transform
<b>fminbnd</b>	Minimize function of one variable on fixed interval
<b>fzero</b>	Find zero of function of one variable
<b>interp1</b>	One-dimensional interpolation (several methods)
<b>ode45</b>	Explicit Runge-Kutta pair for nonstiff differential equations
<b>polyfit</b>	Least squares polynomial fit
<b>quadl</b>	Numerical integration
<b>roots</b>	Roots of polynomial
<b>spline</b>	Cubic spline interpolation